

Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

10/524763

PCT/EP2003/009397



Applicant's or agent's file reference 02061WO/Se	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP2003/009397	International filing date (day/month/year) 25 August 2003 (25.08.2003)	Priority date (day/month/year) 28 August 2002 (28.08.2002)
International Patent Classification (IPC) or national classification and IPC B23B 27/16		
Applicant CERAMTEC AG		

<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of _____ sheets.</p>
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the report</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>

Date of submission of the demand 22 March 2004 (22.03.2004)	Date of completion of this report 01 December 2004 (01.12.2004)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP2003/009397

I. Basis of the report

1. With regard to the elements of the international application:*

- ☒ the international application as originally filed
- ☒ the description:
 pages _____ 1-6 _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☒ the claims:
 pages _____ 1-10 _____, as originally filed
 pages _____, as amended (together with any statement under Article 19
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☒ the drawings:
 pages _____ 1/5-5/5 _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP 03/09397

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	3, 4, 6, 8	YES
	Claims	1, 2, 5, 7, 9, 10	NO
Inventive step (IS)	Claims	3, 4, 6	YES
	Claims	1, 2, 5, 7-10	NO
Industrial applicability (IA)	Claims	1-10	YES
	Claims		NO

2. Citations and explanations

Reference is made to the following documents:

D1: US-A-3 156 032 (GUSTAV LUNDGREN EVERT), 10 November 1964 (1964-11-10)

D2: EP-A-0 901 995 (SUMITOMO ELECTRIC INDUSTRIES), 17 March 1999 (1999-03-17)

1. The application fails to meet the requirements of PCT Article 33(1) because the subject matter of claims 1, 2, 5, 7, 9 and 10 is not novel (PCT Article 33(2)).

- 1.1 . Claim 1

Document **D1** discloses the following (the references in parentheses are to D1):

a cutting insert (41) for clamping in a cutting tool which is suitable for the machining of casting materials, comprising a cutting insert upper surface, a first clamping recess (upper conical surface of hole 63) for clamping in the cutting tool, and a cutting edge for machining, and with a second clamping recess (62) arranged coaxially with

the first clamping recess (figures 17 and 18), the first clamping recess being deeper than the second clamping recess and both clamping recesses being below the level of the cutting insert upper surface (figure 19).

The subject matter of claim 1 therefore lacks novelty (PCT Article 33(2)).

1.2 Claims 2, 5, 7, 9 and 10

The additional features specified in these claims are also known from D1.

2. The subject matter of claim 8 does not involve an inventive step (PCT Article 33(3)).

The subject matter of claim 8 differs from the cutting insert according to D1 in that it is a reversible cutting insert.

The aim is intended to extend the service life of the cutting insert.

However, it is known in the art that reversible cutting inserts have a longer service life because when one side becomes worn a new side can be brought into use by simply turning the cutting insert over. Reversible cutting inserts with clamping recesses are also known (see, for example, document D2). For a person skilled in the art attempting to solve the aforementioned problem it would therefore be an obvious measure to use a reversible cutting insert in conjunction with the device of document D1..

3. Claims 3, 4 and 6

The subject matter of claim 3 differs from the cutting insert according to D1 in that the first clamping recess forms a surface which is parallel to the cutting insert upper surface or is a depression.

The subject matter of claim 6 differs from the cutting insert according to D1 in that the second clamping recess is in the form of an annular raised portion.

The advantage of these features is that the cutting insert can be secured by means of a clamping shoe. A through-hole for a fastening screw (see D1) is not necessary, and the cutting insert is more stable as a result.

The solution proposed in claims 3 and 6 is novel (PCT Article 33(2)) and involves an inventive step (PCT Article 33(3)).

Claim 4 is dependent on claim 3 and therefore also meets the PCT requirements in respect of novelty and inventive step.